

## **REMARKS/ARGUMENTS**

Claims 1-4, 7-19, and 34-47 are pending in this application. For at least the reasons outlined below, all pending claims are believed to be allowable and issuance of the present application is appropriate.

### **CLAIM REJECTIONS UNDER 35 U.S.C. §103**

Claims 1-4, 7-19, and 34-47 have been rejected as being unpatentable over various references as discussed below. The cited references, alone or in combination, fail to teach or suggest all of the claim limitations, and there is no suggestion or motivation to modify or combine the references, as required by MPEP § 2143. At least for these reasons, these rejections are inappropriate and should be withdrawn.

(a) **PRESENT INVENTION**

The present invention is directed towards a laminating device for reinforcing a specific region of a supply web. As recited in claims 1-4, 7-19, and 34-47, this invention provides for, *inter alia*, a secondary web that is advanced a selectable predetermined length and then sheared, prior to being attached to a primary web. The selectable nature of the sheared strip provides a controlled source of material that is easily used for reinforcement of precise regions of the primary web. These features of the present claimed invention provide for the precise placement of reinforcing strips of selectable length on the primary web, resulting in a web that is selectively reinforced in precise regions.

As an initial matter, Applicants note that the Examiner relies on numerous references as the basis of the § 103 rejections. Some of the rejections rely on as many as eight distinct references. Applicants respectfully remind the Examiner of the requirement for all § 103 rejections, that there must be some suggestion or motivation to combine each and every reference that serves as part of the basis for rejection. MPEP §§ 2143, 2143.01. In light of the numerous references cited by Examiner, there is a particularly high burden to establish § 103 rejections. As described herein, Applicants do not believe this burden is met. Further, the Examiner is respectfully reminded that impermissible hindsight may not be used in establishing the suggestion or motivation to combine references. MPEP §§ 2141, 2141.01.

(b) SUMMARY OF § 103 REFERENCES

The specific § 103 references are each addressed below. However, to avoid redundancy some of the references that form the basis of those rejections and the combinations thereof are first discussed.

(i) Fukumoto, Boreali, Hirsch

As discussed in more detail below, various claims of the present invention recite a shear blade that is curved and has a cutting movement that is a rocking motion. *Fukumoto, Boreali*, and *Hirsch* fail to teach or suggest these limitations.

*Fukumoto* describes a movable blade 54 that is pivoted via a rotary cylinder and moves downwardly about a single pivot point (col. 1, lines 57-65; *see, also*, Figure 11). However, nowhere does *Fukumoto* teach or suggest the rocking motion claimed in the present invention. Rather, where *Fukumoto* purports to teach a “rocking motion,” col. 6, lines 3-4, the reference actually teaches only a pivoting motion about a single axis, which is distinct from a rocking motion.

*Boreali* describes a cutter 18 “such as a guillotine cutter, scissors cutter, rotating cutter cylinder...” (col. 3, lines 62-67). Yet *Boreali* also fails to teach or suggest that the cutter 18 cuts in a rocking motion as claimed in the present invention. Accordingly, *Fukumoto* and *Boreali*, each alone or in combination, fail to teach or suggest the limitation of a rocking motion for the shear blade.

Moreover, the Examiner asserts that *Hirsch* discloses a shear blade with a curved cutting edge. However, even assuming *arguendo* that the Examiner is correct in that assertion, there is no evidence to teach or suggest combining *Hirsch* with *Fukumoto* and *Boreali*, as required by MPEP § 2143, to achieve a rocking motion in conjunction with a curved blade. Further, the rotating severing tools 20 and 21 of *Hirsch* could not be operatively combined with the movable blade 54 of *Fukumoto* or the cutter 18 of *Boreali* to achieve the present claimed invention. *See, e.g.*, MPEP § 2143.01 (noting that “If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious.”).

(ii) Foote, Jr.

As discussed in more detail below, various claims of the present invention recite the shear blade extending towards the handling drive but not extending into the path of motion of the handling drive. Similarly, other claims recite the shear blade extending only a predetermined distance past the support blade. *Foote, Jr.* fails to teach or suggest this limitation. The present invention restricts the travel of the shear blade towards the handling drive's path of motion and towards the support blade, which in turn allows a clear path for the handling drive to safely pass by the shear blade.

*Foote, Jr.* discloses an apparatus for attaching a strip of a first web material to a second web material using a cutting member (or "cutter member") 32 to cut a strip from the first web material (Abstract; Col. 5, lines 17-23). The reference describes the cutting member 32 advancing towards the square member 68, which is the element that Examiner asserts teaches the handling drive of the present claimed invention. However, the reference fails to teach or suggest that the cutting member 32 extends towards the square member 68 without extending into the path of motion of the square member 68. To the contrary, *Foote, Jr.* states that cutting member 32 "continues to advance until it engages the waiting anvil 74 on the stationary transfer member 12," where the stationary transfer member (or "transfer drum") 12 includes the square member 68 (Col. 4, lines 6-12; Col. 5, lines 35-40). In other words, the cutting member 32 does not avoid the path of motion of the transfer drum 12, but rather, the cutting member 32 actually strikes the anvil, which is located on the transfer drum.

Accordingly, *Foote, Jr.* fails to teach or suggest the limitation of the shear blade extending towards the handling drive but not extending into the path of motion of the handling drive or extending only a predetermined distance past the support blade.

(iii) Dreier and Taylor, Jr.

As discussed in more detail below, various claims of the present invention recite cam followers causing the cutting motion of the shear blade to be a rocking motion. For instance, claim 37 requires that "a plurality of cam tracks in the shear blade and a plurality of cam pins

coupled to the blade actuator" cause the cutting motion of the shear blade to be a rocking motion. Neither *Dreier* nor *Taylor, Jr.* teach or suggest these limitations.

*Taylor, Jr.* teaches using a follower to move a knife blade between closed and open positions (col. 3, lines 5-16; col. 2, lines 14-18; Figs. 1, 3). However, the followers of *Taylor, Jr.* are not used to cause a cutting motion as claimed in the present invention, but rather they merely open and close the knife. Nor does the knife blade of *Taylor, Jr.* move through a rocking motion.

The *Dreier* reference also fails to teach or suggest cam tracks and pins that cause the cutting motion of a shear blade to be a rocking motion. Rather, *Dreier* teaches movable cutter blade 17 that pivots about a single axis, pivot pin 11, thereby causing a rotating motion. The failing of *Dreier* becomes particularly clear when considering that the reference only describes a single cam track/cam follower combination (cam track 15 and guide pin 14 respectively) and a single pivot point (pivot pin 11) for the cutter blade 17. This configuration of a single cam follower and a single pivot point naturally generates a rotating motion. In contrast, the present claimed invention recites a plurality of cam tracks and a plurality cam followers, which generates a different motion, namely a rocking motion. Further, there is no objective evidence or factual findings, as required by MPEP § 2143.01, to suggest or motivate a modification of the *Dreier* reference to include a plurality of cam tracks and a plurality cam followers as claimed by the present invention.

Accordingly, *Dreier* and *Taylor, Jr.*, each alone or in combination, fail to teach or suggest these limitations.

(c) CLAIMS 1-4, 7, 19, 38, 43-45 – FOOTE, JR., HELM, AND PFAFF, JR.

Claims 1-4, 7, 19, 38, 43-45 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over *Foote, Jr.* (U.S. 4,083,737) in view of *Helm* (U.S. 3,745,893) and *Pfaff, Jr.* (U.S. 4,197,154). Because the combination of these references fails to teach or suggest all of the claim limitations of the present invention, Applicants oppose this rejection.

(i) Reinforcing Strips of Selectable Length

The present invention recites a secondary web that is sheared into a reinforcing strip of selectable length. Specifically, claims 1-4, 7, 19, 38, and 43-45 recite “a secondary feeding mechanism for advancing a selectable predetermined length of secondary web [and] … a shear blade … to cause a reinforcing strip to be sheared from the secondary web...” This allows the laminating device to reinforce selected portions of the primary supply web with reinforcing strips, sheared from selectable lengths of the secondary web. This limitation of claims 1-4, 7, 19, 38, and 43-45 is not described by the combination of cited references, and, therefore, the references fail to teach or suggest all of the claim limitations of the present invention as claimed.

The *Foote, Jr.* reference teaches a cut strip formed from a web such that the length of the cut strip is “substantially equal to the width of the strip to be formed therefrom” (col. 1, lines 67-col. 2, lines 2). Specifically, reciprocating web feed shuttle 16 “feeds the end of the web to the cutting station 10 incrementally a distance substantially equal to the width of the strip to be formed, with the length of the strip being determined by the width of the web 20” (col. 3, lines 17-23) (emphasis added). Accordingly, not only must the cut strip of *Foote, Jr.* have a length equal to its width, but the length and width are “determined by the width of the web...,” and are therefore not selectable. The length of the tear-off strips of *Foote, Jr.* will always be equal to their width. Accordingly, not only does *Foote, Jr.* fail to teach a selectable reinforcing strip length, the tear-off strips will always have a length equal to their width. The present claimed invention has no such restrictions as to its reinforcing strips and is therefore more versatile and robust than the limited teachings of *Foote, Jr.*.

In the June 5, 2003 Office action, the Examiner asserts that, “When a user selects the width of the strip material to be used in the laminating device of Foot, Jr. et al., it is noted that they are also selecting the predetermined length of the web.” Applicants respectfully disagree that *Foot, Jr.* teaches or suggests the present claimed invention because (1) manual selection of a strip’s width by a user, as suggested by the Examiner, is not taught by *Foote, Jr.*; (2) manual selection by a user does not teach or suggest a “selectable predetermined length” by a laminating device as claimed in the present invention; and (3) nowhere does *Foote, Jr.* teach or suggest producing a reinforcing strip of selectable predetermined length accomplished by the real-time

advancement of a selectable length of secondary web as claimed, but rather, the reference merely requires that the tear-off strips have equal length and width.

The Examiner further asserts in the June 5, 2003 Office action that, “it is well known and conventional in the web handling apparatus art, as disclosed by Helm...and Pfaff, Jr. ...to pre-select the length of a severed web portion to be placed onto another continuous web.”

Applicants respectfully assert that the combination of *Foot, Jr.* with the *Helm* and *Pfaff, Jr.* references also fails to teach all of the claim limitations of the present invention.

*Helm* describes patch severing knives 106 and 108 that are “arranged to sever patches of a pre-selected length from web 110...” Col. 4, lines 35-38. However, the “selected” length described in *Helm* is achieved by a fixed arrangement of knives 106 and 108; the length of the severed patch is determined by the circumferential distance between the two knives. Once the apparatus of *Helm* has been assembled and the knives 106 and 108 arranged, the length of patches severed thereby is fixed, not selectable via the laminating device as claimed in the present invention.

In contrast, the present claimed invention recites a secondary feeding mechanism “for advancing a selectable predetermined length of secondary web” and a shear blade that shears the secondary web once the “predetermined length of the secondary web” has been received. Specifically, the present claimed invention produces reinforcing strips of a “selectable predetermine length” by advancing the secondary web a “selectable predetermine length” in real-time.

Not only does *Helm* fail to teach or suggest this limitation—indeed *Helm* accomplishes a “selected” length by spacing knives rather than advancing the web the desired length—but *Helm* does not provide the flexibility or robustness of the present claimed invention. Whereas the present claimed invention provides the ability to conveniently select the length of reinforcing strips by advancing the secondary web the desired length, the apparatus of *Helm* would require complete reconfiguration and reassembly of the vacuum roll 102 and patch severing knives 106 and 108 to select a patch length. The length of the severed web in *Helm* truly is “preselected” and fixed rather than selectable by the real-time advancement of the secondary web (Col. 3, lines 53-59) (emphasis added).

The *Pfaff, Jr.* reference describes that “the length of strip material in each lane can be controlled as desired so that each lane may contain a single strip or a plurality of strips...” (Col. 3, lines 1-3). The reference also states that cutting blades 88 on a cutting roll 87 sever strip 24 (Col. 4, lines, 65-67). The cutting roll 87 is brought into motion by actuators 101-104, and the actuators 101-104 are, in turn, controlled by an output module 148 and a sequencer 125 (Col. 4, lines 37-55; col. 6, lines 28-44). In other words, as strip 24 advances, an output module 148 and a sequencer 125 determine if and when the strip is severed by rotating the cutting blades.

This teaching of *Pfaff, Jr.* fails to teach producing reinforcing strips of a “selectable predetermine length” by advancing the secondary web a “selectable predetermine length” once the “predetermined length of the secondary web” has been received, as claimed in the present invention. Rather, *Pfaff, Jr.* describes cutting blades severing strips by merely actuating a cutting roll, which is controlled by an output module and sequencer; the length of the severed strip is determined exclusively by controlling the cutting blades rather than by advancing a desired length of secondary web. Nothing about the *Pfaff, Jr.* reference describes producing reinforcing strip of a “selectable predetermined length” that is accomplished in the manner claimed by the present invention.

Accordingly, *Foote, Jr., Helm, and Pfaff, Jr.*, each alone or in combination, fail to teach or suggest each and every limitation of claims 1-4, 7, 19, 38, 43-45.

(ii) Shear Blade Does Not Extend Into Path of Motion of Handling

As to claims 38 and 45, which recite the shear blade extending towards the handling drive without extending into the path of motion of the handling drive, the cited references fail to teach or suggest this limitation. As described above, contrary to Examiner’s assertion, *Foote, Jr.* fails to teach or suggest the limitation of the shear blade extending towards the handling drive without extending into the path of motion of the handling drive. Similarly, nowhere do *Helm* or *Pfaff, Jr.* teach or suggest this limitation. For this additional reason, *Foote, Jr., Helm, and Pfaff, Jr.*, each alone or in combination, fail to teach or suggest each and every limitation of claims 38 and 45.

(d) CLAIMS 16-18 AND 40 – FOOTE, JR., HELM, PFAFF, JR., FUKUMOTO, BOREALI, DREIER, TAYLOR JR.

Claims 16-18 and 40 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over *Foote, Jr., Helm, and Pfaff, Jr.* and further in view of *Fukumoto* (U.S. 6,189,469), *Boreali* (U.S. 6,210,515), *Dreier* (U.S. 4,463,693), and *Taylor, Jr.* (U.S. 5,311,741). Because the combination of these references fails to teach or suggest all of the claim limitations of the present invention, Applicants oppose this rejection.

As previously described, the combination of *Foote, Jr., Helm, and Pfaff, Jr.* fails to teach or suggest all of the claim limitations of the independent claims from which claims 16-18 and 40 depend. Because the additional references of *Fukumoto, Boreali, Dreier*, and *Taylor, Jr.* also fail to teach or suggest the limitations of those independent claims, the combination *Foote, Jr., Helm, Pfaff, Jr., Fukumoto, Boreali, Dreier*, and *Taylor Jr.* fails to teach or suggest all of the claim limitations of claims 16-18 and 40.

Additionally, claims 16-18 and 40 recite a rocking motion for the shear blade. As discussed above, neither *Fukumoto* or *Boreali* teach or suggest this limitation, as maintained by Examiner. Nor do the other cited references describe a rocking motion. For this additional reason, the combination of *Foote, Jr., Helm, Pfaff, Jr., Fukumoto, Boreali, Dreier*, and *Taylor Jr.* fails to teach or suggest all of the claim limitations of claims 16-18 and 40.

Additionally, claims 16-18 and 40 recite cam followers causing the cutting motion of the shear blade to be a rocking motion. As discussed above, neither *Dreier* or *Taylor, Jr.* teach or suggest this limitation, as maintained by Examiner. Nor do the other cited references describe this limitation. For this additional reason, the combination of *Foote, Jr., Helm, Pfaff, Jr., Fukumoto, Boreali, Dreier*, and *Taylor Jr.* fails to teach or suggest all of the claim limitations of claims 16-18 and 40.

(e) **CLAIMS 34 AND 35 – FOOTE, JR., HELM, PFAFF, JR., VAN DER KLUGT**

Claims 34 and 35 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over *Foote, Jr.* in view of *Helm, Pfaff, Jr.*, and *van der Klugt*. Because the combination of these references fails to teach or suggest all of the claim limitations of the present invention, Applicants oppose this rejection.

As previously described, the combination of *Foote, Jr., Helm, and Pfaff, Jr.* fails to teach or suggest at least the limitation of moving a secondary web in a selectable predetermined

manner and then shearing the web into a reinforcing strip. This limitation is recited by claims 34 and 35. Moreover, as also previously described, the additional reference of *van der Klugt*, either alone or in combination of the other references, fails to teach or suggest this limitation.

Accordingly, *Foote, Jr., Helm, Pfaff, Jr.*, and *van der Klugt*, each alone or in combination, fail to teach or suggest each and every limitations of claims 34 and 35.

As to claim 35, which recites a heating element for attaching the reinforcing strip via a heat seal, the cited references fail to teach or suggest this limitation. Indeed, the Examiner notes that “*Foote, Jr. et al.* does not disclose a laminating device which includes a heating element for attaching a reinforcing strip via a heat seal.” However, the Examiner asserts that this element is well known and that it would have been obvious to one of ordinary skill in the art to modify the laminating device of *Foote, Jr.* to include a heating element for bonding materials.

Applicants respectfully disagree that one of ordinary skill in the art would attempt, let alone succeed at, modifying *Foote, Jr.*—a reference that tacks two web materials together by the sheer force of a traveling transducer horn 26—to attach a heat sealing heating element to the forcefully moving transducer horn 26 of *Foote, Jr.*. Similarly, the other cited references also fail to disclose this element. Because Examiner’s conclusion that “it would have been obvious to one of ordinary skill in the art...to modify the laminating device of *Foote, Jr. et al.* to include a heating element” is without documentary evidence, Applicants respectfully traverse and request that Examiner provide such evidence, in accordance with MPEP § 2144.03(C).

For this additional reason, *Foote, Jr., Helm, Pfaff, Jr.*, and *van der Klugt*, each alone or in combination, fail to teach or suggest each and every limitation of claim 35.

(f) *CLAIM 36 – FOOTE, JR., HELM, PFAFF, JR., VAN DER KLUGT, FUKUMOTO, BOREALI*

Claim 36 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over *Foote, Jr., Helm, Pfaff, Jr.*, and *van der Klugt* and further in view of *Fukumoto* and *Boreali*. Because the combination of these references fails to teach or suggest all of the claim limitations of the present invention, Applicants oppose this rejection.

As previously described, the combination of *Foote, Jr., Helm, Pfaff, Jr.*, and *van der Klugt* fails to teach or suggest all of the claim limitations of claim 34 from which claim 36 depends. Because the additional references of *Fukumoto* and *Boreali* also fail to teach or suggest

the limitations of claim 34, the combination of *Foote, Jr., Helm, Pfaff, Jr., Fukumoto, and Boreali* fails to teach or suggest all of the claim limitations of claim 36.

Additionally, claim 36 recites a rocking motion for the shear blade. As discussed above, neither *Fukumoto* or *Boreali* teach or suggest this limitation, as maintained by Examiner. Nor do the other cited references describe a rocking motion. For this additional reason, the combination of *Foote, Jr., Helm, Pfaff, Jr., Fukumoto, and Boreali* fails to teach or suggest all of the claim limitations of claim 36.

(g) *CLAIMS 37, 41, AND 42 – FOOTE, JR., HELM, PFAFF, JR., VAN DER KLUKT, FUKUMOTO, BOREALI, DREIER, TAYLOR, JR.*

Claims 37, 41, and 42 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over *Foote, Jr., Helm, Pfaff, Jr., van der Klugt, Fukumoto* and *Boreali* and further in view of *Dreier* and *Taylor, Jr.* Because the combination of these references fails to teach or suggest all of the claim limitations of the present invention, Applicants oppose this rejection.

As previously described, the combination of *Foote, Jr., Helm, Pfaff, Jr., van der Klugt, Fukumoto, and Boreali* fails to teach or suggest all of the claim limitations of claim 36 from which claims 37, 41, and 42 depend. Because the additional references of *Dreier* and *Taylor, Jr.* also fail to teach or suggest the limitations of claim 36, the combination *Foote, Jr., Helm, Pfaff, Jr., Fukumoto, Boreali, Dreier, and Taylor, Jr.* fails to teach or suggest all of the claim limitations of claims 37, 41, and 42.

Claim 37 recites a rocking motion for the shear blade created by a plurality of cam tracks and a plurality of cam pins. As discussed above, neither *Dreier* or *Taylor, Jr.* teach or suggest this limitation, as maintained by Examiner. Nor do the other cited references describe a rocking motion. For this additional reason, the combination of *Foote, Jr., Helm, Pfaff, Jr., van der Klugt, Fukumoto, Boreali, Dreier, and Taylor, Jr.* fails to teach or suggest all of the claim limitations of claim 37.

Claims 41 and 42 recite controlling the motion of the shear blade such that it extends only a predetermined distance past the support blade and does not extend into the path of motion of the movable applicator. As discussed above, *Foote, Jr.* does not teach or suggest these limitations, as maintained by Examiner. Nor do the other cited references describe these limitations. For this additional reason, the combination of *Foote, Jr., Helm, Pfaff, Jr., van der*

*Klugt Fukumoto, Boreali, Dreier, and Taylor, Jr.* fails to teach or suggest all of the claim limitations of claims 41 and 42.

(h) ***CLAIMS 1, 3, 4, 8-11, 38, 43, AND 45-47 – VAN DER KLUGT, BOREALI, HELM, PFAFF, JR.***

Claims 1, 3, 4, 8-11, 38, 43, and 45-47 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over *van der Klugt* in view of *Boreali, Helm, and Pfaff, Jr.* Because the combination of these references fails to teach or suggest all of the claim limitations of the present invention, Applicants oppose this rejection.

(i) **Reinforcing Strips of Selectable Length**

The present invention recites a secondary web that is sheared into a reinforcing strip of selectable length. Specifically, claims 1, 3, 4, 8-11, 38, 43, and 45-47 recite “a secondary feeding mechanism for advancing a selectable predetermined length of secondary web [and] ... a shear blade ... to cause a reinforcing strip to be sheared from the secondary web...” This allows the laminating device to reinforce selected portions of the primary supply web with reinforcing strips, sheared from selectable lengths of the secondary web. This limitation of claims 1, 3, 4, 8-11, 38, 43, and 45-47 is not described by the combination of cited references, and, therefore, the references fail to teach or suggest all of the claim limitations of the present invention.

The *van der Klugt* reference teaches cutting continuous strips 16 and 17 into discrete lengths or segments. Specifically, *van der Klugt* describes how the rotation of knife 44 is precisely timed to cut the strips at “the lines where the adjacent edges of the tables 27b and 27c adjoin” (col. 3, lines 65-col. 4, lines 3). Thus, the length of each cut segment 46 is fixed to be equal to the length of tables 27b and 27c, which are of square shape (col. 3, lines 46-47). The cut segment of *van der Klugt* must have a length equal to its width, which is equal to the length of the tables, and is therefore not selectable. Accordingly, *van der Klugt* fails to teach a reinforcing strip of selectable length.

In the June 5, 2003 Office action, the Examiner asserts that, “When a user selects the size of the handling manifold to be used in the laminating device of *van der Klugt*, it is noted that they are also selecting a predetermined length of the web.” Applicants respectfully disagree that *van der Klugt* teaches or suggests the present claimed invention because (1) manual selection of

a handling manifold size by a user, as suggested by the Examiner, is not taught by *van der Klugt*; (2) manual selection by a user does not teach or suggest a “selectable predetermined length” by a laminating device as claimed in the present invention; and (3) nowhere does *van der Klugt* teach or suggest producing a reinforcing strip of selectable predetermined length accomplished by the real-time advancement of a selectable length of secondary web as claimed, but rather, the reference merely requires that the cut segments have a length equal to the length of the tables.

The Examiner further asserts in the June 5, 2003 Office action that, “it is well known and conventional in the web handling apparatus art, as disclosed by Helm...and Pfaff, Jr. ...to pre-select the length of a severed web portion to be placed onto another continuous web.”

Applicants respectfully disagree and assert that, as discussed in more detail above, neither *Helm* nor *Pfaff, Jr.* teaches or suggests producing reinforcing strip of a “selectable predetermined length” that is accomplished in the manner claimed by the present invention.

Accordingly, *Foote, Jr., Helm, and Pfaff, Jr.*, each alone or in combination, fail to teach or suggest each and every limitations of claims 1, 3, 4, 8-11, 38, 43, and 45-47.

(ii) Boreali Not Properly Combinable With Van Der Klugt To Teach Shear Blade Positioned Perpendicular to Web and Movable Through Cutting Motion

The Examiner acknowledges that *van der Klugt* does not disclose a laminating device with “a shear blade that is both positioned perpendicular to the secondary material web and movable through a cutting motion,” but states that these limitations are disclosed by *Boreali*. Applicants respectfully assert that *Boreali* is not properly combinable with *van der Klugt* to teach these limitations because (1) there is no suggestion or motivation to combine these references as required as required by MPEP § 2143; and (2) a combination of these references would destroy the intended function of *van der Klugt*, contrary to MPEP § 2143.

*Boreali* does not state that “guillotine cutters, scissors cutters, or rotating cutting cylinders can be used interchangeably for cutting a strip material,” as suggested by Examiner, nor does the reference state that these varied cutters can be used interchangeably regardless of the type of apparatus being modified. *Boreali* merely describes a cutter 18 “such as a guillotine cutter, scissors cutter, rotating cutter cylinder...” (col. 3, lines 62-67). At most, this teaching indicates that these different types of cutters may be use in the apparatus of *Boreali*. Further, none of the cited references otherwise address, either explicitly or implicitly, any of the accepted

sources of motivation for combining references defined by MPEP § 2143—the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art. Therefore, the cited references fail to provide “objective evidence” or any “specific factual findings with respect to the motivation to combine references” as required by MPEP § 2143.01.

MPEP § 2143 notes that “if proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification.” In the present case, modifying *van der Klugt* as proposed by Examiner would destroy its intended purpose.

The *van der Klugt* reference teaches a knife 44 that engages and severs strips 16 and 17 at the adjacent edges of moving tables 27b and 27c after the strips have been laid on table 27a (col. 3, lines 62-col. 4, lines 3; Fig. 1). Importantly, the moving tables 27a-27h have flat surfaces for receiving the cut strips, such that the combination of three tables “form an essentially flat, continuous bed” (col. 3, lines 46-56) (emphasis added). Moreover, the flatness of tables 27a-27h is necessary for the pad 10 to pass between rollers 11, 12 and table 27f (Fig. 1).

Because of the arrangement of tables 27b and 27c and rotating cylindrical knife 44 of *van der Klugt*, if one attempted to replace the cylindrical knife with a scissors or guillotine cutting mechanism, there would be no appropriate space for the scissors or guillotine—which cut perpendicular to the motion of strip 17—to move through a cutting motion without encountering the tables 27b and 27c, which would in turn disrupt the cutting motion of the scissors or guillotine (See Fig. 1). This result is inevitable due to strips 16 and 17 being located directly on the continuous bed of tables 27b and 27c. That configuration would therefore destroy the intent, purpose, and function of the *van der Klugt* reference, and render it inoperable for its intended purpose. *Boreali* describes a cutter 18 “such as a guillotine cutter, scissors cutter, rotating cutter cylinder...,” but fails to resolve the inoperability that would result from attempting to move a guillotine or scissors cutter directly into the flat surface of the tables 27a-27h of *van der Klugt*.

In the June 5, 2003, Office action, Examiner responded to Applicants’ arguments regarding the non-combinability of *van der Klugt* and *Boreali* by asserting that:

Boreali et al. was presented only to provide motivation for using guillotine cutters, scissors cutters, and rotating cutting cylinders interchangeably for cutting a strip material. The rejection then goes to state that it would have

been obvious to one of ordinary skill in the art at the time of the invention to replace the cutting mechanism of *van der Klugt* with the cutting mechanism such as that of *Fukumoto*...[M]odifying the cutting mechanism disclosed [sic] *van der Klugt* to include the cutting mechanism such as that suggested by *Fukumoto* would result in a functioning laminating apparatus that would include a flat support blade [stationary blade 53] positioned adjacent to the table of *van der Klugt* that would cooperate with a shear blade perpendicularly positioned shear blade [sic] to sever web portions at the edges of each table.

Applicants note that in neither of the previous Office actions were any of claims 1, 3, 4, 8-11, 38, 43, and 45-47—which recite a shear blade positioned perpendicular to the secondary web and movable through a cutting motion—rejected under *Fukumoto*. Accordingly, Applicants did not address the reference in this particular context. However, even including *Fukumoto* as part of the rejection against claims 1, 3, 4, 8-11, 38, 43, and 45-47, Applicants still assert a lack of properly combinable references.

*Fukumoto* describes a movable blade 54 that is pivoted via a rotary cylinder and moves downwardly, cutting in cooperation with stationary blade 53 (col. 1, lines 50-65; *see, also*, Figure 11). However, modifying *van der Klugt* by positioning the stationary blade 53 of *Fukumoto* adjacent to the table 27a-27h of *van der Klugt* would be impossible or would destroy the references' function. Specifically, the width of strips 16 and 17 is substantially the same as the width of tables 27a-27h (*see Fig. 2*) and the sever-line of strips 16 and 17 is substantially perpendicular to the motion of strips 16 and 17 (*see Figs. 1 and 2*). The perpendicular sever-line requires that the would-be scissors or guillotine that the Examiner proposes combining with *van der Klugt* would have to sever strips 16 and 17 across the line of motion of the strips. But, because the motion of strips 16 and 17 is substantially the same as the motion of tables 27b and 27c (at least immediately preceding and immediately following the severing of strips 16 and 17), and because strips 16 and 17 are held in place directly against the continuous bed of tables 27b and 27c (*see col. 3, lines 62-64*), such a sever-line would require that the scissors or guillotine cut directly into tables 27b and 27c.

Since the strips are positioned directly against the tables, there is no space for arranging a stationary blade 53 from *Fukumoto*, as proposed by Examiner and as required by the scissors or guillotine disclosed in *Fukumoto*. If one attempted to use the tables 27b and 27c as a stationary blade, the scissors or guillotine would encounter the tables, thereby disrupting the tables' motion

and likely damaging the tables. For at least these reasons, having a stationary blade “positioned adjacent to the table of *van der Klugt*” as suggested by Examiner, is infeasible and would destroy the references’ intended purposes.

(iii) Shear Blade Does Not Extend Into Path of Motion of Handling Drive

As to claims 38 and 45, which recite the shear blade extending towards the handling drive without extending into the path of motion of the handling drive, the cited references fail to teach or suggest this limitation. Examiner asserts that *Foote, Jr.* discloses this feature. Although *Foote, Jr.* is not otherwise cited as a basis of rejection for claims 1, 3, 4, 8-11, 38, 43, and 45-47, even considering *Foote, Jr.* as part of the rejection against these claims, the reference still fails to teach or suggest the limitation of the shear blade extending towards the handling drive without extending into the path of motion of the handling drive, as described above. Similarly, nowhere do *van der Klugt, Boreali, Helm*, or *Pfaff, Jr.* teach or suggest this limitation. For this additional reason, *van der Klugt, Boreali, Helm, Pfaff, Jr.* and *Foote, Jr.*, each alone or in combination, fail to teach or suggest each and every limitation of claims 38 and 45.

(i) CLAIM 12 – VAN DER KLUGT, BOREALI, HELM, PFAFF, JR., FUKUMOTO, HIRSCH

Claim 12 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over *van der Klugt, Boreali, Helm*, and *Pfaff, Jr.* and further in view of *Fukumoto* and *Hirsch*. Because the combination of these references fails to teach or suggest all of the claim limitations of the present invention, Applicants oppose this rejection.

As previously described, the combination of *van der Klugt, Boreali, Helm*, and *Pfaff, Jr.* fails to teach or suggest all of the claim limitations of claim 1 from which claim 12 depends. Because the additional references of *Fukumoto* and *Hirsch* also fail to teach or suggest the limitations of claim 1, the combination *van der Klugt, Boreali, Helm, Pfaff, Jr., Fukumoto* and *Hirsch* fails to teach or suggest all of the claim limitations of claim 12.

Additionally, claim 12 recites a rocking motion for the shear blade, and Examiner asserts that *Fukumoto* discloses this feature. However, as discussed above, *Fukumoto* fails to teach or suggest a rocking motion for the shear blade, as maintained by Examiner. Nor do the other cited references describe a rocking motion. For this additional reason, the combination of *van der*

*Klugt, Boreali, Helm, Pfaff, Jr., Fukumoto and Hirsch* fails to teach or suggest all of the claim limitations of claim 12.

(j) *CLAIMS 13-15 AND 39 – VAN DER KLUGT, BOREALI, HELM, PFAFF, JR., FUKUMOTO, HIRSCH, DREIER, TAYLOR, JR.*

Claims 13-15 and 39 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over *van der Klugt, Boreali, Helm, Pfaff, Jr., Fukumoto and Hirsch* and further in view of *Dreier* and *Taylor, Jr.* Because the combination of these references fails to teach or suggest all of the claim limitations of the present invention, Applicants oppose this rejection.

As previously described, the combination of *van der Klugt, Boreali, Helm, Pfaff, Jr., Fukumoto and Hirsch* fails to teach or suggest all of the claim limitations of claim 1 from which claims 13-15 and 39 depend. Because the additional references of *Dreier* and *Taylor, Jr.* also fail to teach or suggest the limitations of claim 1, the combination *van der Klugt, Boreali, Helm, Pfaff, Jr., Fukumoto, Hirsch, Dreier, and Taylor, Jr.* fails to teach or suggest all of the claim limitations of claims 13-15 and 39.

Claims 13-15 and 39 recite a rocking motion for the shear blade created by a plurality of cam tracks and a plurality of cam pins. As discussed above, neither *Dreier* or *Taylor, Jr.* teach or suggest this limitation, as maintained by Examiner. Nor do the other cited references describe a rocking motion caused by cam tracks and cam pins. For this additional reason, the combination of *van der Klugt, Boreali, Helm, Pfaff, Jr., Fukumoto, Hirsch, Dreier, and Taylor, Jr.* fails to teach or suggest all of the claim limitations of claims 13-15 and 39.

Claim 39 recites controlling the motion of the shear blade such that it does not extend into the path of motion of the handling drive. As discussed above, *van der Klugt* does not teach or suggest these limitations, as maintained by Examiner. Nor do the other cited references describe these limitations. For this additional reason, the combination of *van der Klugt, Boreali, Helm, Pfaff, Jr., Fukumoto, Hirsch, Dreier, and Taylor, Jr.* fails to teach or suggest all of the claim limitations of claim 39.

(k) *CLAIMS 34 AND 35 – VAN DER KLUGT, BOREALI, HELM, PFAFF, JR.*

Claims 34 and 35 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over *van der Klugt* in view of *Boreali, Helm, and Pfaff, Jr.* Because the combination of these

references fails to teach or suggest all of the claim limitations of the present invention, Applicants oppose this rejection.

As previously described, the combination of *van der Klugt, Boreali, Helm, and Pfaff, Jr.* fails to teach or suggest at least the limitation of moving a secondary web in a selectable predetermined manner and then shearing the web into a reinforcing strip. This limitation is recited by claims 34 and 35. Moreover, as also previously described, *Boreali* is not properly combinable with *van der Klugt* because (1) there is no suggestion or motivation to combine these references as required as required by MPEP § 2143; and (2) a combination of these references would destroy the intended function of *van der Klugt*, contrary to MPEP § 2143.

Accordingly, *van der Klugt, Boreali, Helm, and Pfaff, Jr.*, each alone or in combination, fail to teach or suggest each and every limitation of claims 34 and 35.

(l) *CLAIM 36 – VAN DER KLUGT, BOREALI, HELM, PFAFF, JR., FUKUMOTO*

Claim 36 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over *van der Klugt, Boreali, Helm, and Pfaff, Jr.* and further in view of *Fukumoto*. Because the combination of these references fails to teach or suggest all of the claim limitations of the present invention, Applicants oppose this rejection.

As previously described, the combination of *van der Klugt, Boreali, Helm, and Pfaff, Jr.* fails to teach or suggest all of the claim limitations of claim 34 from which claim 36 depends. Because the additional reference of *Fukumoto* also fails to teach or suggest the limitations of claim 34, the combination *van der Klugt, Boreali, Helm, Pfaff, Jr., and Fukumoto* fails to teach or suggest all of the claim limitations of claim 36.

Additionally, claim 36 recites a rocking motion for the shear blade. As discussed above, neither *Fukumoto* or *Boreali* teach or suggest this limitation, as maintained by Examiner. Nor do the other cited references describe a rocking motion. For this additional reason, the combination of *van der Klugt, Boreali, Helm, Pfaff, Jr., and Fukumoto* fails to teach or suggest all of the claim limitations of claim 36.

- (m) *CLAIMS 37 AND 41 – VAN DER KLUGT, BOREALI, HELM, PFAFF, JR., FUKUMOTO, DREIER, TAYLOR, JR.*

Claims 37 and 41 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over *van der Klugt, Boreali, Helm, Pfaff, Jr.*, and *Fukumoto* and further in view of *Dreier* and *Taylor, Jr.* Because the combination of these references fails to teach or suggest all of the claim limitations of the present invention, Applicants oppose this rejection.

As previously described, the combination of *van der Klugt, Boreali, Helm, Pfaff, Jr.*, and *Fukumoto* fails to teach or suggest all of the claim limitations of claim 36 from which claims 37 and 41 depend. Because the additional references of *Dreier* and *Taylor, Jr.* also fail to teach or suggest the limitations of claim 36, the combination *van der Klugt, Boreali, Helm, Pfaff, Jr., Fukumoto, Dreier, and Taylor, Jr.* fails to teach or suggest all of the claim limitations of claims 37 and 41.

Additionally, claim 37 recites a rocking motion for the shear blade created by a plurality of cam tracks and a plurality of cam pins. As discussed above, neither *Dreier* or *Taylor, Jr.* teach or suggest this limitation, as maintained by Examiner. Nor do the other cited references describe a rocking motion. For this additional reason, the combination of *van der Klugt, Boreali, Helm, Pfaff, Jr., Fukumoto, Dreier, and Taylor, Jr.* fails to teach or suggest all of the claim limitations of claim 37.

Additionally, claim 41 recites controlling the motion of the shear blade such that it extends only a predetermined distance past the support blade and does not extend into the path of motion of the movable applicator. As discussed above, *van der Klugt* does not teach or suggest these limitations, as maintained by Examiner. Nor do the other cited references describe these limitations. For this additional reason, the combination of *van der Klugt, Boreali, Helm, Pfaff, Jr., Fukumoto, Dreier, and Taylor, Jr.* fails to teach or suggest all of the claim limitations of claim 41.

## **CONCLUSION**

Applicants submit that all pending claims are allowable and respectfully request that a Notice of Allowance be issued in this case. In the event a telephone conversation would expedite the prosecution of this application, the Examiner may reach the undersigned at (612) 607-7387.

Serial No 09/698,009  
In reply to Office Action mailed June 5, 2003  
Page 29 of 29

If any fees are due in connection with the filing of this paper, then the Commissioner is authorized to charge such fees including fees for any extension of time, to Deposit Account No. 50-1901 (Attorney Docket No. 5544-301).

Respectfully submitted,

By   
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